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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/673,518

09/30/2003

Takao Tsuzuki

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08/21/2007

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EXAMINER

JERABEK, KELLY L

ART UNIT

PAPER NUMBER

2622

MAIL DATE

DELIVERY MODE

08/21/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/673,518

Applicant(s)

TSUZUKI, TAKAO

Examiner

Kelly L. Jerabek

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 3 and 9 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-8 is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-2 and 4-8 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1-2 and 4-6 are rejected under 35 U.S.C. 102(b) as being anticipated by the applicants admitted prior art.**

Re claims 1 and 5, the applicant's admitted prior art discloses a linear image sensor (figure 1) comprising: at least one photodiode array (101a, 101b); a readout gate (102a, 102b) provided parallel to the photodiode array (101a, 101b) on one side of the photodiode array (101a, 101b); a CCD shift register (103a, 103b) provided parallel to the readout gate (102a, 102b); an output circuit (104a, 104b) provided for output from

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the CCD shift register (103a, 103b) (figure 1; specification pages 1-2); and a shutter structure (105a, 105b, 106) provided parallel to the photodiode array (101a, 101b) on the other side of the photodiode array (101a, 101b), the shutter structure including: a shutter drain (106) and a shutter electrode (see figure 1; electrode connecting the shutter gates 105a, 105b) provided between the photodiode array (101a, 101b) and the shutter drain (106), said shutter electrode (see figure 1; electrode connecting the shutter gates 105a, 105b) further continuously extending across said shutter drain (106) (the examiner is reading the electrode for connecting the shutter gates 105a, 105b and for supplying the  $\phi_{SG}$  signal to the shutter gates 105a, 105 b as the claimed shutter electrode; see specification pages 1-2 and figure 1).

Re claims 2 and 6, the applicant's admitted prior art shows that an upper portion of the shutter drain (106) is covered with the shutter electrode (see figure 1; electrode connecting the shutter gates 105a, 105b).

Re claim 4, the applicant's admitted prior art shows that the shutter structure (105a, 105b, 106) is provided between the photodiode arrays (101a, 101b) (figure 1).

***Allowable Subject Matter***

**Claims 7-8 are allowed.**

The following is an examiner's statement of reasons for allowance:

Re claims 7-8, the prior art fails to teach or suggest, "A linear image sensor comprising: a photodiode array pair provided parallel to each other; a shutter gate electrode that is provided parallel to the photodiode array pair so as to be common to the photodiode array pair; and a shutter drain that is provided below the shutter gate electrode; wherein said shutter electrode is provided between each of said photodiode array pair and said shutter drain, **said shutter electrode extending to directly above said shutter drain so that said shutter gate electrode becomes a single shutter gate electrode**".

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

### ***Contacts***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kelly L. Jerabek whose telephone number is **(571) 272-7312**. The examiner can normally be reached on Monday - Friday (8:00 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on **(571) 272-7372**. The fax phone number for submitting all Official communications is **(571) 273-7300**. The fax phone number for submitting informal communications such as drafts, proposed amendments, etc., may be faxed directly to the Examiner at **(571) 273-7312**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KLJ



LIN YE  
SUPERVISORY PATENT EXAMINER